

What we claim is:

1. A personal air supply device integrated with chairs having armrests adapted for use in conjunction with an existing building or vehicle ventilation system, said personal air supply device comprising:

5           a supply duct in communication with a conduit of the building or vehicle ventilation system;

          a horizontal duct in communication with said supply duct and integrated into an armrest of the chair;

10           an airflow regulating device arranged to selectively regulate the rate of airflow through said horizontal duct between a pre-determined minimum airflow and a pre-determined maximum airflow;

          a tube in communication with said horizontal duct and having a free end moveable relative to said horizontal duct; and

          a nozzle secured to the free end of said tube,

15           wherein a portion of air conditioned by said existing building or vehicle ventilation system passes through said supply duct, horizontal duct, tube and nozzle to be released near a breathing zone of an occupant of said chair.

20           2. The personal air supply device of claim 1, wherein said supply duct, horizontal duct and tube are covered with insulation and a layer to protect said insulation.

25           3. The personal air supply device of claim 1, comprising flexible support for said tube, said flexible support permitting said nozzle to be positioned adjacent a breathing zone of a person seated in said chair and, once so positioned, said nozzle remaining substantially stationary until moved by said person.

30           4. The personal air supply device of claim 1, wherein said nozzle has a cone-shaped cup body having a first end connected with said tube, said cup body expanding to an open second end having a diameter of between 6 cm and 12 cm, said cup body having a height of approximately 10 cm between said first and second ends.

5. The personal air supply system of claim 4, wherein said nozzle is made of non-flammable rubber.

5           6. The personal air supply system of claim 4, comprising a baffle secured to the second end of said cup body to reduce mixing between air leaving the nozzle and ambient air.

10           7. The personal air supply device of claim 1, wherein said horizontal duct includes a small concave chamber for receiving air freshener, said chamber being provided with perforations through which said air freshener mixes with air flowing through said horizontal duct.

15           8. The personal air supply device of claim 7, wherein said chamber is defined by a cup-shaped apparatus fixed in position by spring pin running through two of said perforations.

20           9. The personal air supply device of claim 8, wherein comprising a cover on the top of said cup-shaped apparatus, said cover moveable across the top of the chamber but not removable from said cup-shaped apparatus.

          10. The personal air supply device of claim 8, wherein said cup-shaped apparatus is made of metal or plastic.

25           11. The ventilation system according to claim 8, wherein said cover is arranged to slide across the top of said chamber.

          12. The ventilation system according to claim 11, wherein said board is made of air impermeable flexible plastic.

30           13. A method of operating a ventilation system including a main ventilation system serving a space and personal air supply devices located at chairs arranged in said space, said method comprising:

(1) setting said main ventilation system to supply conditioned air at a flow rate of approximately 8 l/s/person;

(2) setting said personal air supply devices to supply conditioned air at a flow rate of approximately 2 l/s;

5       (3) decreasing the flow rate of conditioned air supplied by said main ventilation system to approximately 2 l/s/person after occupants of said space are seated in said chairs;

10       (4) increasing the flow rate of conditioned air supplied by said main ventilation system to approximately 8 l/s/person before the occupants leave said space; and

(5) reducing the flow rate of conditioned air supplied by said main ventilation system to approximately 2 l/s/person after all the occupants leave said space.

15       14. The method of operating a ventilation system of claim 13, comprising:  
repeating steps (3) and (4) for each cycle of seating occupants in said space.